Project Baseline Summary Report

Data Source: **EM CDB** Report Number: **GEN-01b**

Operations/Field Office: **Idaho** Print Date: **3/10/2000**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory** HQ ID: **0171**

Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

SUMMARY: This PBS includes scope associated with completion of the Waste Area Group (WAG) 6 and 10 activities identified in the Federal Facility Agreement/Consent Order. These activities include investigation and remediation of the Experimental Breeder Reactor (EBR-1), the Boiling Water Reactor Experiment (BORAX), miscellaneous release sites and unexploded ordnance sites located throughout the INEEL, and the site-wide groundwater assessment. The PBS also includes scope associated with integrating all INEEL soil and groundwater monitoring activities.

PURPOSE: This project covers the assessment and remediation of WAGs 6 and 10 at the INEEL. WAG 6 consists of the EBR-1 and the Boiling Water Reactor BORAX areas. Both the EBR-1 and the BORAX areas were originally constructed to house test reactors and have been decommissioned. EBR-1 is now a National Historic Landmark, open to the public. Historically, the BORAX area housed five different reactors, but many of the facilities were dismantled or moved and no operations other than monitoring takes place in the area. WAG 10 includes miscellaneous surface sites and liquid disposal areas throughout the INEEL that are not included within other WAGs. WAG 10 also includes regional Snake River Plain Aquifer concerns related to the INEEL that cannot be addressed on a WAG-specific basis. During the course of the forty year operational history at the INEEL, contaminants have been introduced into the environment through incidental releases/spills and waste management practices. To address these past releases the Department of Energy, Environmental Protection Agency, and the State of Idaho entered into a tri-party Federal Facilities Agreement/Consent Order in December 1991. The ten WAG 6/10 Operable Units (OUs) include 38 potential release sites and the Snake River Plain Aquifer. The various release sites have been grouped into ten OUs based on the nature of the potential release and together comprise WAG 6/10. The ten OUs are composed of known and potential releases from underground storage tanks (OU 6-03), disposal ponds (OUs 6-02/10-01/02), injection wells (OU N/A), septic tanks (OU N/A), buried cables (OU 10-07), burial sites (OU 6-01) and radioactive contaminated soils (OU 6-04/10-06). Contaminants of concern included radionuclides, metals, organics, and acids. Assessment of potential WAG 6/10 release sites at the INEEL includes characterizing the nature and extent of the contamination at each potential release site, determining and documenting unacceptable impacts to human health and the environment, and determining the implementability and cost effectiveness of various remedial alternatives for clean up of those release sites which pose an unacceptable risk to human health and the environment. The WAG 10 overarching goal is to describe the impact of the INEEL, over its operational history, on the "environment" within and about the area of the INEEL. This PBS is a comprehensive overview of impacts and their associated risks due to the research and development actions performed, at a large scale.

Current planning includes characterization of one remaining OU (OU 10-04), which is the comprehensive evaluation of all WAG 6/10 potential release sites with a Record of Decision being required for all the OUs, either separately or combined into the WAG 6/10 Comprehensive Remedial Investigation/Feasibility Study (RI/FS) assessment Record of Decision and the resulting Remedial Design(s)/Remedial Action(s). The OU 10-04 Comprehensive RI/FS is designed to determine the cumulative risk to human health and the environment from all of the release sites as well as perform a INEEL wide ecological assessment. The Remedial Design/Remedial Action will implement the clean up selected in the OU 10-04 Record of Decision. These activities are being conducted as specified in the tri-party (DOE, Environmental Protection Agency, and the State of Idaho) Federal Facilities Agreement/Consent Order and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Completion of these activities support the goal of deleting the INEEL from the National Priorities List (Superfund Site). This PBS also includes scope associated with the integration of all INEEL soil and groundwater monitoring activities. These activities have been consolidated into one PBS to improve the cost effectiveness and consistency of the monitoring.

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Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

Project Description Narratives

DEFINITION OF SCOPE: *Complete the OU 10-04 Comprehensive Remedial Investigation/Feasibility Study as per the Federal Facility Agreement/Consent Order.
*Complete the OU 10-04 RI/FS Record of Decision as per the Federal Facility Agreement/Consent Order.
*Implement the OU 10-04 the Remedial Decision/Remedial Action as per the Federal Facility Agreement/Consent Order and the OU 10-04 Record of Decision.
*Implement long-term INEEL surveillance, maintenance, and monitoring as per the OU 10-04 Record of Decision.
* Complete closure of STF Firing Range.

TECHNICAL APPROACH: Assessment of the 38 WAG 6/10 potential release sites has been conducted in accordance with the Federal Facilities Agreement/Consent Order and the Comprehensive Environmental Response, Compensation and, Liability Act (CERCLA). The assessment has/will include characterization of the release sites through the determination of the nature and extent of the potential release and an evaluation of the impact of the release (if any) on human health and the environment. The characterization approach, as specified in the Federal Facilities Agreement/Consent Order, required Track 1, Track 2, Remedial Investigations/Feasibility Studies (RI/FS) and Comprehensive (RI/FS) to be conducted for the 38 WAG 6/10 release sites. Track 1 investigations were performed at sites that did not require further characterization as a basis for a decision for No Further Action and were by definition envisioned to be evaluations of existing data. Track 2 investigations were performed at those sites that required field data collection before a decision could be made for No Further Action or Interim Action of the site. RI/FS were performed at those sites at which sufficient data existed to demonstrate unacceptable risks to human health and the environment but required more data before a remedial action could be selected. This process provided a bias for action for those sites which posed immediate threats to human health and the environment.

To date, 17 Track 1s, two track 2s, one interim action, and one RI/FS have been completed at the twelve WAG 6/10 OUs. These investigations are currently being evaluated in the WAG 6/10 Comprehensive RI/FS (OU 10-04) in respect to determining the final action for all of the potential release sites that do not have action determinations (No Further Action/Further Action) and will be the final investigation under WAG 10. Upon completion of the OU 10-04 Comprehensive RI/FS, a Record of Decision will be prepared detailing remedial actions that must be performed at those sites which pose unacceptable risk to human health and the environment. This process will ultimately result in the deletion of WAGs 6 and 10 and the INEEL from the National Priorities List (Superfund Site). The cleanup process will include remediation of sites at WAGs 6 and 10 with unacceptable risk by 2005. These sites (and contaminated soil sites in other WAGs addressed by WAG 10) will be remediated using an appropriate combination of institutional control, caps, treatment, bioremediation, detonation, or excavation. Rad contaminated soils may be disposed at an onsite CERCLA soil consolidation facility constructed adjacent to the ICPP.

Current or planned remediation activities are NOT dependent upon EM-50 science or technology development initiatives. However, development of these sciences or technologies could potentially result in schedule and/or cost savings.

Seeded data in the waste module was not provided by the PBS Manager. The data source is AVS, but validation is not possible because the data is entered by waste stream, not PBS.

Project Status in FY 2006:

Project Description Narratives

All investigations and remedial actions for WAG 10 will be completed. These include:
* All Track 1 and Track 2 determinations
* Record of Decision and cleanup of OU 10-05 Ordnance Interim Action
* Completion of the OU 10-03 and OU 10-06 Non-time Critical Removal Actions, and final OU 10-04 Comprehensive RI/FS and Record of Decision identifying the remaining sites requiring cleanup
* Cleanup of sites identified by the OU 10-04 RI/FS ROD. Of the twelve sites currently identified for final evaluation in the OU 10-04 RI/FS, seven of the sites are anticipated to require cleanup.

Post-2006 Project Scope:

Cleanup of ordnance areas and soil contamination will be completed by 2008 specifically for EBR-15, LCCDA-01, LCCDA-02, OU 10-03 (ordnance areas), OU 10-04, OMRE-01, and STF.

Project End State

Long term groundwater and ecological monitoring will be ongoing. WAG 6/10 will be remediated in accordance with the current land use planning assumptions for residential use after 100 years. Some administrative controls will likely be required for OU 10-03 ordnance sites and the BORAX area. Completion of the activities contained in this Project Baseline Summary support the goal of deletion of the INEEL from the National Priorities List (Superfund Site).

Cost Baseline Comments:

The Baseline costs represented here do not include contingency for authorized work packages, but do contain contingency for planning packages. This contingency is removed upon development of detailed work packages. The INEEL Environmental Restoration (ER) Program has, since 1991, promoted use of the bottoms up/Activity Based Costing (ABC) approach, in the development of planning estimates its Assessment and Remedial Design and Remedial Action projects. All INEEL ER cost estimates have been developed using sound technical and planning principles, and are accompanied by basis of estimate documentation intended to demonstrate the rationale and specifics behind the estimates. Bottoms Up estimating, or ABC, wherein the work scope is portrayed down to the task level, is both desired and encouraged, but not always practical.

The basis of estimates include a well defined statement of work, performance measures, products required for completion, products delivered, key support activities, and known milestones, etc., for every level of the program work scope. For work scope with definable milestones and deliverables, the cost estimates are very detailed and more precise. For more subjective work scope, where it is difficult to identify a specific end-product or deliverable, detail is provided to the lowest level possible. In most cases, the clarity of the available scope and associated planning assumptions is a key consideration in determining the specific technique used to develop a particular cost estimate.

Assumption: Known ordnance contaminated areas will not be free released and will be institutionally managed.

Escalation rates used for FY-2001 through lifecycle are compounded 2.1% annually.

The cost estimates associated with this Project Baseline Summary are based on completing the enforceable milestones identified in the Federal

Project Baseline Summary Report

Project Description Narratives

Facilities Agreement/Consent Order.

Safety & Health Hazards:

This project is presently collecting the appropriate data to make risk based decisions regarding future clean up activities through the CERCLA process. In the outyears, remedial actions concerning the INEEL WAG 6 & 10 sites will be performed. Consequently the necessary safety and health functions required to maintain safe and compliant operations now and in the future ware in place and operating properly. The primary hazards associated with the closure of the WAG 6 & 10 sites include low level radiological constituents, organic contaminants, inorganic compounds, and TNT/RDX contamination. During remedial actions and maintenance and monitoring activities there will also be a number of industrial safety and industrial hygiene related hazards to address such as slips, trips, and falls; lifting; working on elevated structures; moving equipment; inhalation of dusts; temperature extremes; etc.

Hazard documentation developed includes, but is not limited to, project specific health and safety plans, detailed operating procedures, standard operating procedures, job safety analyses, job hazard analyses, etc. These documents will be developed during the early stages of each project and will determine the methods, procedures, and equipment used during project implementation to reduce hazards to workers and the environment.

Safety & Health Work Performance:

The resources necessary to accomplish the planned work safely and in compliance are identified through the Health and Safety Program requirements as well as the authorization basis discussed previously. Resources allocated at the site to ensure compliance with health and safety requirements, as well as safety on the job include: radcon, safety, industrial hygiene, occupational medical, fire, emergency management, safeguards and security, performance oversight, quality, the Voluntary Protection Program, etc. Safety and health resources are planned and allocated into the appropriate category by cost center through the work breakdown structure and they are loaded into each project for each fiscal year. Institutional support, such as medical facilities and personnel, security, fire protection, etc., are funded out of the financial systems indirect labor adder, and project-specific safety and health professional support (e.g., industrial safety engineer) is identified in specific control account plans where the support is required. The average cost per FTE, burdened, is approximately $60/hour to $65/hour for each of the safety professionals identified above. Presently there are no plans to conduct full DOE operational readiness reviews although all projects will undergo a complete evaluation of their readiness to proceed with field activities. Applicable projects will complete unreviewed safety question determinations. Personnel are trained in Stop Work Authority, emergency preparedness procedures, health and safety plans, work plans, integrated safety management, integrated work control, conduct of operations, and conduct of maintenance, etc. Safety, radcon, health, fire, environmental, and quality personnel conduct routine inspections to ensure personnel and the environment are protected. The frequency of these inspections is dependent on the status of each particular project but generally ranges between daily to every other week. During field work the same level of ESH&Q support is required throughout the project. At this time the level of support required of the safety professionals will be reduced significantly and will only be performed during maintenance and monitoring activities. There are currently no unfunded or under funded safety, health, environmental, or quality resource requirements associated with this PBS. Upon completion of remedial actions, and the initiation of institutional controls, the level of safety and health resources required will be reduced to a minimum.

Resource levels vary from fiscal year to fiscal year depending on the extent of sampling and/or remediation activities being performed.

PBS Comments:

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Project Description Narratives

The sitewide monitoring PBS will integrate WAG-specific Comprehensive Post-ROD monitoring in Long Term S&M. WAG-specific groundwater and ecological monitoring will roll to the Sitewide Monitoring PBS when the WAG-specific Comprehensive RI/FS ROD is signed. Monitoring of the WAG-specific soil covers and other surface sites will be performed by the WAG until the WAG RD/RA activities are complete, and then the responsibility will roll to Sitewide Monitoring.

Baseline Validation Narrative:

The INEEL Environmental Management Integration Team performed a compliance and cost estimating review of all activities associated with this PBS. This PBS reflects the comments and recommendations associated with the review. The Remediation Program has, since 1991, promoted use of the bottoms up/ABC approach, in the development of planning estimates for Assessment and Remedial Design and Remedial Action projects. All INEEL Remediation Program cost estimates have been developed using sound technical and planning principles and are accompanied by basis of estimate documentation intended to demonstrate the rationale and specifics behind the estimates. Bottoms Up estimating or Activity Based Costing, wherein the work scope is portrayed down to the task level, is both desired and encouraged.
The basis of estimates include a well defined statement of work, performance measures, products required for completion, products delivered, key support activities, and known milestones, etc., for every level of the program work scope. For work scope with definable milestones and deliverables, the cost estimates are very detailed and more precise. For more subjective work scope, where it is difficult to identify a specific end-product or deliverable, detail is provided to the lowest level possible. In most cases, the clarity of the available scope and associated planning assumptions is a key consideration in determining the specific technique used to develop a particular cost estimate.

General PBS Information

Project Validated? Yes **Date Validated:** 2/13/1996

Has Headquarters reviewed and approved project? No

Date Project was Added: 12/1/1997

Baseline Submission Date:

FEDPLAN Project? Yes

Drivers:

CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
Y	Y	N	N	N	Y	Y	Y

Project Identification Information

DOE Project Manager: P. Kroupa

DOE Project Manager Phone Number: 208-526-8419

DOE Project Manager Fax Number: 208-526-0598

Project Baseline Summary Report

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Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

General PBS Information

DOE Project Manager e-mail address: KROUPAPC@INEL.gov

Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	36,909	302,162	339,071	5,823	6,179	456	2,702	4,356	3,586	2,635	5,156	3,447	3,673	3,268	4,509
PBS Baseline (constant 1999 dollars)	34,645	210,780	245,425	5,823	6,179	456	2,702	4,356	3,492	2,513	4,816	3,154	3,291	2,868	3,876
PBS EM Baseline (current year dollars)	36,909	302,162	339,071	5,823	6,179	456	2,702	4,356	3,586	2,635	5,156	3,447	3,673	3,268	4,509
PBS EM Baseline (constant 1999 dollars)	34,645	210,780	245,425	5,823	6,179	456	2,702	4,356	3,492	2,513	4,816	3,154	3,291	2,868	3,876

	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS Baseline (current year dollars)	4,417	7,100	9,495	9,695	100,618	124,958	39,360	6,519	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	3,719	5,854	7,668	7,669	74,810	83,738	23,773	3,549	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	4,417	7,100	9,495	9,695	100,618	124,958	39,360	6,519	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	3,719	5,854	7,668	7,669	74,810	83,738	23,773	3,549	0	0	0	0	0	0	0	0

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Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/30/2008

Current Projected End Date of Project: 9/30/2026

Explanation of Project Completion Date Difference (if applicable):

Consistency with lifecycle cost module required inclusion of long term surveillance and monitoring.

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	64,753	**Actual 1997 Cost:**	6,179	**Actual 1998 Cost:**	2,702
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	55,872	**Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):**			1,509
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	57,381				

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):	108,138	Scoping discussions with regulators resulted in the need for additional remediation
Cost Growth Associated with Scope Previously Reported (+):	73,624	Lifecycle costs increased as a result of detailed schedule and cost estimate analysis
Cost Reductions Due to Science & Technology Efficiencies (-):		

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Site Summary Level: **Idaho National Engineering and Environmental Laboratory** HQ ID: **0171**

Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

Project Reconciliation

Subtotal:	239,143
Additional Amount to Reconcile (+):	3
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	**239,146**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Completed Assessments of Release Sites (11)	W10RSFA00				9/30/2000						
Completed Assessments of Release Sites (2)	W10RSFA99				9/30/1999						
Completed Release Site (2)	W1ORSFC99				9/30/1999						
Completed Release Sites (2)	W10RSFC06				9/30/2006						
Completed Release Sites (3)	W10RSFC02				9/30/2002						
Completed Release Sites (6)	W10RSFC00				9/30/2000						
OU 10-6 Draft RI/FS Report Sent by DOE-ID to EPA/IDHW for Review	2XEP024		10/31/1995	10/31/1995		4/28/1995	Y				
OU 10-04 Draft RI/FS ROD Sent to EPA/IDHW for Review	RREP010		4/1/2002	5/31/2001	5/31/2001		Y				
OU 10-04 Draft RI/FS Report Sent by DOE-ID to EPA/IDHW for Review	RREP024		6/1/2001	7/21/2000	7/31/2000		Y				
OU 10-04 Draft RI/FS SOW Sent by DOE-ID to EPA/IDHW for Review	RREP037		6/30/1998	6/30/1998		11/13/1996	Y				
OU 10-05 DOE-ID Submit Draft RA Report to EPA/IDHW for Review	RSEP6170		1/31/1994	1/31/1994		1/31/1994	Y				
OU 10-04 Draft RI/FS WP Sent by DOE-ID to EPA/IDHW for Review	RREP039		11/30/1998	11/30/1998	1/14/1999		Y				
OU 10-08 Draft RI/FS WP sent by DOE-ID to EPA/IDHW for review			4/1/2002								
OU 10-08 Draft RI/FS Report sent by DOE-ID to			1/2/2004								

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Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
EPA/IDHW for review											
OU 10-08 Draft RI/FS ROD sent by DOE-ID to EPA/IDHW for review			10/29/2004								
OU 10-04 Draft RD/RA SOW sent by DOE-ID to EPA/IDHW for review			4/22/2002								
OU 10-04 Draft RD/RA WP sent by DOE-ID to EPA/IDHW for review			8/1/2003								
OU 10-04 Draft RA Report sent by DOE-ID to EPA/IDHW for review			10/1/2006								
OU 10-08 Draft RD/RA SOW seny by DOE-ID to EPA/IDHW for review			11/19/2004								
OU 10-08 Draft RD/RA WP sent by DOE to EPA/IDHW for review			5/1/2006								
OU 10-08 Draft RA Report sent by DOE=ID to EPA/IDHW for review			8/1/2009								
Project Start			10/1/1996								
Project Complete			9/30/2026								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Completed Assessments of Release Sites (11)	W10RSFA00									Y	
Completed Assessments of Release Sites (2)	W10RSFA99									Y	
Completed Release Site (2)	W1ORSFC99									Y	
Completed Release Sites (2)	W10RSFC06									Y	

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Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Completed Release Sites (3)	W10RSFC02									Y	
Completed Release Sites (6)	W10RSFC00									Y	
OU 10-6 Draft RI/FS Report Sent by DOE-ID to EPA/IDHW for Review	2XEP024										
OU 10-04 Draft RI/FS ROD Sent to EPA/IDHW for Review	RREP010										
OU 10-04 Draft RI/FS Report Sent by DOE-ID to EPA/IDHW for Review	RREP024										
OU 10-04 Draft RI/FS SOW Sent by DOE-ID to EPA/IDHW for Review	RREP037										
OU 10-05 DOE-ID Submit Draft RA Report to EPA/IDHW for Review	RSEP6170										
OU 10-04 Draft RI/FS WP Sent by DOE-ID to EPA/IDHW for Review	RREP039										
OU 10-08 Draft RI/FS WP sent by DOE-ID to EPA/IDHW for review											
OU 10-08 Draft RI/FS Report sent by DOE-ID to EPA/IDHW for review											
OU 10-08 Draft RI/FS ROD sent by DOE-ID to EPA/IDHW for review											
OU 10-04 Draft RD/RA SOW sent by DOE-ID to EPA/IDHW for review											

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Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
OU 10-04 Draft RD/RA WP sent by DOE-ID to EPA/IDHW for review											
OU 10-04 Draft RA Report sent by DOE-ID to EPA/IDHW for review											
OU 10-08 Draft RD/RA SOW seny by DOE-ID to EPA/IDHW for review											
OU 10-08 Draft RD/RA WP sent by DOE to EPA/IDHW for review											
OU 10-08 Draft RA Report sent by DOE=ID to EPA/IDHW for review											
Project Start				Y							
Project Complete					Y						

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planne 20(
RS														
Assess.	NR	14.00	0.00	14.00	1.00							13.00		
RS														
Cleanup	NR	4.00	11.00	15.00		1.00	1.00					2.00		
Tech.														
Deployed	Ntd	1.00	0.00	1.00										1.(

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Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
RS Assess.	NR		1.00										
RS Cleanup	NR		1.00			11.00							
Tech. Deployed	Ntd	1.00											

Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total
RS Assess.	NR									15.00
RS Cleanup	NR									15.00
Tech. Deployed	Ntd									1.00

Release Sites

Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
INEL	0337		BORAX-02 \ BORAX-1 BURIAL SITE [BORAX-02]	Waste/Ditches	1995		8/8/1995	1997		9/30/1997	1991	N		Y
INEL	0402		BORAX-01 \ BORAX-II-V LEACH POND [BORAX-01]	Liquid Surface Impoundments/Seepage Basins	2002	2002		2008	2008		1991	N		Y
INEL	0403		BORAX-08 \ BORAX Ditch [BORAX-08]	Waste/Ditches	2002	2002		2008	2008		1993	N		Y
INEL	0404		BORAX-09 \ BORAX II, III, IV, V Reactor Facilities (Building 171) [BORAX-09]	Buildings & Equipment/Other	2002	2002		2008	2008		1994	N		Y

Project Baseline Summary Report

Data Source: **EM CDB** Report Number: **GEN-01b**

Operations/Field Office: **Idaho** Print Date: **3/10/2000**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory** HQ ID: **0171**

Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

Release Sites

Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
				Buildings										
INEL	0408		EBR-15 \ RADIOACTIVE SOIL CONTAMINATION (EBR-1) [EBR-15]	Spills and Leaks/Surface Spills	2002	2002		2008	2008		1991	N		Y
INEL	0414		LCCDA-01 \ LCCDA OLD DISPOSAL PIT (WEST END) [LCCDA-01]	Waste/Pits	2002	2002		2008	2008		1991	N		Y
INEL	0415		LCCDA-02 \ LCCDA LIMESTONE TRMT AND DISPOSAL PIT (E. END)[LCCDA-02)	Waste/Pits	2002	2002		2008	2008		1991	N		Y
INEL	0417		N/A \ Ordnance Area Interim Action	Dispersed Surface Contamination/Firing Ranges and Ordnance	2002	2002		2008	2008		1991	N		Y
INEL	0418		N/A \ ORDNANCE AREAS (INCLUDING NODA)	Dispersed Surface Contamination/Firing Ranges and Ordnance	2002	2002		2008	2008		1991	N		Y
INEL	0419		N/A \ Radionuclide Contaminated Soils [OU 10-06]	Above Ground Material / Waste/Debris Piles	2002	2002		2002	2002		1992	N		Y
INEL	0420		N/A \ WAG-10 COMPREHENSIVE / SNAKE RIVER AQUIFER RI/FS	Surface and Groundwater/Groundwater Plumes	2005	2005		2005	2005		1991	N		Y
INEL	0421		OMRE-01 \ OMRE LEACH POND	Liquid Surface Impoundments/Seepage Basins	2002	2002		2008	2008		1991	N		Y
INEL	3011		STF-01/STF-601 Sumps and Pits	/	2002	2002		2008	2008			N		N
INEL	3012		STF-02/STF GUN RANGE	/	2002	2002		2008	2008			N		N
INEL	3013		ORD-29/IMPACT AREAS ON NORTH FACE OF BIG SOUTHERN BUTTE	/	2002	2002		2002	2002			N		N

Technology Needs

Technology Needs

Site Need Code: ID-6.1.02

Site Need Name: Real-time Field Instrumentation for Characterization and Monitoring Soils and Groundwater.

Focus Area Work Package ID: SS-01 **Focus Area Work Package:** Characterization, Monitoring, Modeling and Analysis

Focus Area: SCFA **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02457: I7 - MLLW-Soil/Sludge	Y	N
	02432: W2.2 - LLW-Soil	Y	N
	02446: I4.1 - Treated LLW-Soil	Y	N
	02443: I2 - HAZ-Soil	Y	N
	02465: -	Y	N
	02493: T9 - HAZ-Soil	Y	N
	02486: -	Y	N
	02460: -	Y	N
	02459: -	Y	N
	02499: -	Y	N

Site Need Code: ID-6.1.25

Site Need Name: Pretreatment of Explosives Contaminated Soil for Biological Remediation

Focus Area Work Package ID: SS-07 **Focus Area Work Package:** Vadose Zone Treatment Systems

Focus Area: SCFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Both

Technology Needs

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Site Need Code: ID-6.2.08

Site Need Name: Separation of Cs, Sr, and Co in Contaminated Soils

Focus Area Work Package ID: SS-07 **Focus Area Work Package:** Vadose Zone Treatment Systems

Focus Area: SCFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Segmented Gate System		
Segmented Gate System	0	

Site Need Code: ID-6.2.11

Site Need Name: In-situ Immobilization of Radionuclides in Groundwater

Focus Area Work Package ID: SS-08 **Focus Area Work Package:** Saturated Zone Treatment Systems

Focus Area: SCFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Related CCP Milestones	Related Waste Streams	Agree?	Change?

Technology Needs

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02483: -	Y	N
	02496: W5 - MTRU-Sludge	Y	N

Site Need Code: ID-6.2.22

Site Need Name: In-Situ Treatment of TNT/RDX Contaminated Soil

Focus Area Work Package ID: SS-07 **Focus Area Work Package:** Vadose Zone Treatment Systems

Focus Area: SCFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Site Need Code: ID-S.1.01

Site Need Name: Microbial Alteration of Heavy Metal and Radionuclide Partitioning at Mineral Surfaces

Focus Area Work Package ID: **Focus Area Work Package:**

Focus Area: **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02485: L3 - LLW-Soil	Y	N
	02483: -	Y	N

Technology Needs

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02466: T4 - D&D MLLW-Rubble/Debris	Y	N
	02487: -	Y	N
	02464: L1 - HAZ-Soil	Y	N
	02463: T3 - MLLW-Soil	Y	N
	02484: -	Y	N
	02462: I8.1 - Treated MLLW	Y	N
	02461: I8 - MLLW-Soil	Y	N
	02496: W5 - MTRU-Sludge	Y	N
	02488: T10 - LLW-Rubble/Debris	Y	N
	02486: -	Y	N

Site Need Code: ID-S.1.04

Site Need Name: Real-time Field Instrumentation for Characterization and Monitoring Soils and Groundwater.

Focus Area Work Package ID: **Focus Area Work Package:**

Focus Area: **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02457: I7 - MLLW-Soil/Sludge	Y	N
	02456: I6.1 - MLLW-Sludge	Y	N
	02448: I6 - MLLW-Sludge	Y	N
	02432: W2.2 - LLW-Soil	Y	N

Technology Needs

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02446: I4.1 - Treated LLW-Soil	Y	N
	02443: I2 - HAZ-Soil	Y	N
	02489: -	Y	N
	02465: -	Y	N
	02493: T9 - HAZ-Soil	Y	N
	02486: -	Y	N
	02460: -	Y	N
	02459: -	Y	N
	02499: -	Y	N

Site Need Code: ID-S.2.01

Site Need Name: Definition of ´Biologically Active Zones´ in Fractured Rock Environments

Focus Area Work Package ID: **Focus Area Work Package:**

Focus Area: **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02483: -	Y	N
	02496: W5 - MTRU-Sludge	Y	N

Site Need Code: ID-S.2.03

Site Need Name: Aqueous Transport of Soluble Radionuclides and Heavy Metals: Evaluation of Non-Equilibrium Processes and Native Surfaces in Porous Media

Focus Area Work Package ID: **Focus Area Work Package:**

Project Baseline Summary Report

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Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

Technology Needs

Focus Area:

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams	Agree?	Change?
02443: I2 - HAZ-Soil	Y	N
02459: -	Y	N
02460: -	Y	N
02486: -	Y	N
02493: T9 - HAZ-Soil	Y	N
02484: -	Y	N
02465: -	Y	N
02463: T3 - MLLW-Soil	Y	N
02464: L1 - HAZ-Soil	Y	N
02499: -	Y	N
02497: W2 - MTRU-Soil	Y	N
02457: I7 - MLLW-Soil/Sludge	Y	N
02446: I4.1 - Treated LLW-Soil	Y	N
02432: W2.2 - LLW-Soil	Y	N
02469: O2 - MLLW-Liquid	Y	N
02470: O2.1 - MLLW-Solids	Y	N
02498: W2.1 - MTRU-Soil/Rubble/Debris	Y	N
02491: T7.1 - LLW-Soil	Y	N

Technology Needs

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02483: -	Y	N
	02485: L3 - LLW-Soil	Y	N
	02492: T8 - HAZ-Soil	Y	N
	02489: -	Y	N

Site Need Code: ID-S.2.04

Site Need Name: Physics and Chemistry of Plasma Processing

Focus Area Work Package ID: MW-06

Focus Area Work Package: Monitoring and Removing Hazardous and Radioactive Contaminants from Off Gas Streams

Focus Area: MWFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02497: W2 - MTRU-Soil	Y	N
	02488: T10 - LLW-Rubble/Debris	Y	N
	00751: -	Y	N
	00747: A - Liquids	Y	N
	00784: A4 - LLW-Soil/Rubble/Debris	Y	N
	00776: A2 - HAZ-Soil	Y	N
	00780: A3 - LLW-Liquid	Y	N
	02462: I8.1 - Treated MLLW	Y	N
	02484: -	Y	N
	02426: -	Y	N

Project Baseline Summary Report

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Project **ID-ER-108 / Sitewide Monitoring Area Remediation**

Technology Needs

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	02463: T3 - MLLW-Soil	Y	N
	02486: -	Y	N
	02489: -	Y	N
	02492: T8 - HAZ-Soil	Y	N
	02487: -	Y	N
	02466: T4 - D&D MLLW-Rubble/Debris	Y	N
	02469: O2 - MLLW-Liquid	Y	N
	02470: O2.1 - MLLW-Solids	Y	N
	02491: T7.1 - LLW-Soil	Y	N
	00734: AAD - Wet Aluminum Based SNF	Y	N
	00740: AAH - INTEC 603 Metallic Sodium Bonded	Y	N
	00716: AAA - TAN Wet Stainless Steel, Zirconium, & Misc SNF	Y	N
	00720: AAB - Wet Stainless Steel, Zirconium, & Misc SNF	Y	N
	02485: L3 - LLW-Soil	Y	N
	02464: L1 - HAZ-Soil	Y	N

Technology Deployments

	Deployment Year		
Deployment Status	**Planned**	**Forecast**	**Actual Date**
Technology Name: Segmented Gate System			
Potential Deployment	2004	2004	